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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/057,003

01/24/2002

Flavia Borella

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12/18/2002

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVE
SUITE 6300
SEATTLE, WA 98104-7092

EXAMINER

A, MINH D

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/057,003

Applicant(s)

BORELLA ET AL.

Examiner

Minh D A

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/24/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 and 13 are rejected under 35 U.S.C. 102(b) as being unpatentable by Li et al (US 5,945,788).

Regarding claim 1, Li discloses the electronic ballast for a gas discharge lamp comprising the steps of:

(104 and 106) for preheating filaments of the lamp by applying a low current for a predetermined time;

(108) for igniting the lamp by increasing at a predetermined increasing rate a voltage applied to the lamp up to a predetermined ignition value;

(140) for monitoring a lamp current of the lamp;

(142) for repeating the steps of igniting the lamp and monitoring the lamp current for a predetermined numbers of times if the lamp current is over a predetermined threshold; and powering the lamp at normal operating conditions. See figures 1A and 1B, col.2, lines 56-67 to col.7, lines 1-47.

Regarding claim 2, Li also discloses the step of repeating the steps of igniting the lamp and monitoring the lamp current for a predetermined numbers of times if the lamp

current is over a predetermined threshold does not comprise the step of preheating the lamp filaments (104 and 106) in figure 1A.

Regarding claim 3, Li discloses that, after having repeated the steps of igniting the lamp and monitoring the lamp current for a predetermined numbers of times the lamp does not work correctly, said electronic ballast is turned off. See col.3, lines 6-12.

Regarding claim 4, Li discloses the preheating, igniting, monitoring, repeating, and powering steps are performed in response to a fault during lamp working in figure 1A.

Regarding claim 5, Li discloses the fault during lamp working occurs a predetermined number of times, the electronic ballast is turned off. See col.3, lines 6-12.

Regarding claim 6, Li discloses the preheating, igniting, monitoring, repeating, and powering steps are performed in response to a lamp removal. See col.3, lines 6-17.

Regarding claim 7, Li discloses the electronic ballast for driving a gas discharge lamp at a drive frequency, comprising:

(120) for preheating filaments of the lamp by setting the drive frequency at a preheat frequency for a preheating period;

(122) for attempting to ignite the lamp by shifting the drive frequency from the preheat frequency to an operating frequency;

(124) for determining from a lamp current of the lamp whether the lamp has ignited within a predetermined ignition period; and

(126) for determining that the lamp has not ignited within the ignition period.

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re-attempting to ignite the lamp by maintaining the drive frequency at the operating frequency without shifting to the preheat frequency. See figure 1B, col.4, lines 62-67 to col.7, lines 1-52.

Regarding claim 8, Li discloses the electronic ballast comprising performing the determining and re-attempting steps a predetermined number of times, and turning off the electronic ballast if the lamp does not ignite within the predetermined number of times. See col.3, lines 1-17.

Regarding claim 9, Li discloses the electronic ballast includes a drive circuit (660) that drives the lamp and a controller(500) that controls the drive circuit (660), the controller(500) including a timing (580) and protection circuit (540) that supplies a begin-preheating signal to begin the preheating period, disables the begin-preheating signal to end the preheating signal, continuously supplies a begin-ignition signal during the ignition period and during the re-attempting step and continues to disable the begin-preheating signal in response to determining that the lamp has not ignited within the ignition period. See figure 4, col.12, lines 35-67 to col.18, lines 1-34.

Regarding claim 13, Li discloses the electronic ballast for a gas discharge lamp having a plurality of filaments (104 and 106) comprising:

(120) for preheating filaments of the lamp by setting the drive frequency at a preheat frequency for a preheating period;

(122) for attempting to ignite the lamp by shifting the drive frequency from the preheat frequency to an operating frequency;

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(124 to 134) for determining from a lamp current of the lamp whether the lamp has ignited within a predetermined ignition period; and means for, in response to determining that the lamp has not ignited within the ignition period, re-attempting to ignite the lamp by maintaining the drive frequency at the operating frequency without shifting to the preheat frequency. See figures 1A and 1B, col.2, lines 56-67 to col.7, lines 1-47.

Allowable Subject Matter

3. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach or fairly suggest that, the timing and protection circuit includes a timing capacitor and a flip-flop having an input coupled to the timing capacitor, a first output that produces the begin-preheating signal, and a second output that produces the begin-ignition signal, the method further comprising charging the timing capacitor in response to receiving a reset signal, measuring a voltage across the timing capacitor, determining whether the voltage across the timing capacitor exceeds a threshold, and, in response to determining that the voltage across the timing capacitor exceeds the threshold, driving the first output into a disabled state and driving the second output into an enabled state.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jayaraman et al. (US 5,650,569); Primisser et al. (US 6,400,095); Krummel. (US 6,310,447); Chiang et al. (US 6,420,839) are cited to show the electronic ballast for at least one discharge lamp.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (703) 605-4247. The examiner can normally be reached on M-F (7:30 –4:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (703) 308-4856. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

Examiner

Minh A

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12/08/02

